

Apparatus and Method for Fabrication of Nanostructures Using Decoupled Heating of Constituents

ABSTRACT

In one embodiment, an apparatus for fabricating nanostructure-based devices on a workpiece includes: a stage for supporting a workpiece, a radiating-energy source, and a feedstock delivery system. The workpiece has catalyst deposited thereon. The workpiece includes multiple work regions (e.g., dies). The feedstock delivery system is for delivery of feedstock gas to said catalyst. The feedstock delivery system is configured to directly heat catalyst on at least one die via simultaneously emitted multiple prongs of radiating energy. Preferably, the feedstock delivery system includes a feedstock heating system that is configured to heat the feedstock gas not merely by any global heating of a chamber containing the work region or any direct excitation of gas over the work region by the radiating energy.